

ABSTRACT OF DISCLOSURE

A method is provided for performing a clear channel assessment in a wireless network. The method involves first listening for channel energy on a wireless channel. Whatever channel energy is heard over the wireless channel is demodulated into non-synchronized in-phase and non-synchronized quadrature phase components. Each of the non-synchronized in-phase and non-synchronized quadrature phase components are squared, and then the non-synchronized in-phase component is multiplied by the non-synchronized quadrature phase component to produce an I-Q product. The sum of the squared non-synchronized in-phase component, the inverse of the squared non-synchronized quadrature component, and double the I-Q product is determined as a clear channel assessment input value. A carrier signal detection function is then performed on the clear channel assessment input value to produce a clear channel assessment output value, which is used to determine whether a signal is present in the wireless channel.